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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/743,259
Filing Date: December 22, 2003
Appellants: Lindsay, Jeffrey Dean, et al.

Alan R. Marshall
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed April 7, 2008 appealing from the Office action mailed December 22, 2007.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is not correct. Claim 30 is not pending, as it was canceled. The Final Office Action was mailed Oct. 22, 2007, not Oct. 22, 2008.

(4) Status of Amendments After Final

The statement of the status of amendments contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

2003/0173018	HARRIS	9-2003
6,635,798	YOSHIOKA	10-2003

(9) Grounds of Rejection

The following grounds of rejection are applicable to the appealed claims:

Claims 13, 16, 20, 22-24, 26, 29, 33, and 35-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harris (U.S. Patent Application Publication No. 2003/0173018) in view of Yoshioka (U.S. Patent No. 6,635,798).

For Claims 13, 22, 23, 26, 35, and 36, Harris teaches an absorbent garment or absorbent product with multiple components (diaper, paragraphs 5, 13-14). Harris teaches an adhesive secured between two flat substrates such as those forming a diaper (paragraph 14). The adhesive is applied at least partly according to a swirl-like pattern, with the swirl-like pattern including a plurality of loops having a size, the adhesive pattern changing as a function of distance, and the adhesive pattern changing according to adhesive dose in weight per area along the distance (Figs. 7-11 and paragraphs 12 and 39-43; note that a crossing pattern forms loops). Harris teaches that

the adhesive pattern changes as a function of distance according to adhesive dose along the distance (Figs. 7-11 and paragraphs 12 and 39-43). Harris teaches the adhesive pattern alternating between the swirl-like pattern and a continuous bead (Figs. 7-8A and 10-11, and paragraph 39). Harris teaches that the thicker sections of adhesive are formed by crossover points forming conglomerated adhesive masses, with the adhesive masses being preferably at least twice the width of the thinner sections of adhesive; this is a change in adhesive dose as a function of distance (Figs. 7-11 and paragraphs 12 and 39-42). Harris teaches that the thinner sections of adhesive may be stretched, including stretching to their breaking point; this is a change in adhesive dose as a function of distance, as well as a variation in weight per area of adhesive (paragraph 42). Harris does not expressly teach the weight per unit area of adhesive applied varying by at least 20%, 50%, or 90% by weight. Applicant's specification does not disclose that having the weight per unit area of adhesive vary by at least 20%, 50%, or 90% by weight serves any stated purpose or solves any particular problem. See *In re Boesch and Slaney,* 205 USPQ 215 (CCPA 1980). Given Harris' teaching of thick conglomerated adhesive masses joined by thin or even broken adhesive filaments, it would have been obvious to one of ordinary skill in the art for the weight per unit area of adhesive to vary by at least 20%, 50%, or 90% by weight.

Further for Claims 13, 22, 23, 26, 35, and 36, Harris does not expressly teach a plurality of loops in which the size of the loops changes as a function of distance. However, the size of loops changing as a function of distance is well known in the art. In addition, Applicant's specification does not disclose that a plurality of loops in which

the loops change size as a function of distance serves any stated purpose or solves any particular problem; on the contrary, Applicant's specification teaches that change in loop size is equivalent to other approaches, such as changing loop shape or changing from a loop pattern to a linear bead; see specification, Fig. 2 and page 6-8. Yoshioka teaches the size of loops changing as a function of distance (Figs. 1 and 4; note that the claim does not require any particular amount of size change, nor that the function is regular). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Harris to include a suitable loop size, including a change in loop size as a function of distance, as taught by Yoshioka. Harris also does not expressly teach the flat substrates of the diaper being the liner, outer cover, or absorbent structure, or the absorbent structure being located adjacent the interior surface of the outer cover. However, it is well known in the art of diaper manufacturing for flat substrates between which elastic strands are adhesively attached to be a liner, an outer cover, or an absorbent structure positioned between the liner and the outer cover, or adjacent to the interior surface of the outer cover. Yoshioka confirms this and teaches elastic strands adhesively attached between a liner and an outer cover and adjacent the interior surface of the outer cover (outer cover is backsheet 3, Figs. 1 and 3, col. 2, lines 29-38, and col. 6, lines 17-22). It would have been obvious to one of ordinary skill in the art of diaper manufacturing to modify Harris for the adhesively attached flat substrates to be the liner and outer cover of an absorbent garment, as taught by Yoshioka.

For Claims 16 and 29, Harris teaches the adhesive filaments having a desired width (paragraph 33). Harris does not expressly teach the adhesive being applied in an

amount ranging from about 1 gsm to about 100 gsm. Yoshioka teaches the adhesive being applied in an amount ranging from about 1 gsm to about 100 gsm or about 50 gsm (col. 6, lines 7-14, Claims 1 and 3). Adhesive amount is a result effective variable, since it affects the strength of the bonds created. The discovery of an optimum value of a result effective variable is ordinarily within the ordinary skill in the art. See *In re Boesch and Slaney,* 205 USPQ 215 (CCPA 1980).

For Claims 20 and 33, Harris teaches the garment being a diaper (paragraphs 13 and 14).

For Claims 24 and 37, Harris teaches the continuous bead having a zigzag pattern or a scalloped pattern (Figs. 7-8a).

(10) Response to Argument

Applicant argues that Harris fails to disclose that the adhesive pattern alternates between the swirl-like pattern and a continuous bead. Applicant also argues that the prior Office Action takes the position that it would be obvious to use the patterns from both Harris and Yoshioka in an alternating pattern. This is a mischaracterization of the prior Office Action. Harris teaches an adhesive pattern that includes a swirl-like pattern (the swirl-like patterns are located at the crossover points 112 in Fig. 7, at adhesive masses 122 in Figs. 8 and 8A, and at adhesive masses 142 in Figs. 10 and 11; paragraphs 39-40 and 42-43; note that in Fig. 7, the uppermost elastic strand 14 is shown as having eleven swirl-like patterns from left to right, while in Fig. 10, the leftmost elastic strand 14 is shown as having four swirl-like patterns from top to bottom). Harris

teaches an adhesive pattern that alternates these swirl-like patterns with a continuous bead (the continuous beads are the thinner filament sections 114 in Fig. 7, the thinner filament sections 124 in Figs. 8-8A, and the thinner filament sections 144 in Figs. 10-11; paragraphs 39-40 and 42-43; note that in Fig. 7, the uppermost elastic strand 14 is shown as beginning at the left with a continuous bead, then changing to a swirl-like pattern, then changing back to a continuous bead, and so on, alternating eleven times and ending at the right of the figure with a continuous bead; in Fig. 10, for the leftmost elastic strand 14 four alternations from continuous bead to swirl-like pattern are shown in the figure, beginning at the top in a continuous bead). Alternating between a swirl-like pattern and a continuous bead would not require alternating between the patterns of Harris and Yoshioka; Harris shows this alternation on its own.

Applicant does not define the terms "adhesive pattern" or "swirl-like pattern" either in the claims or the specification. The usual definition of "swirl" is twisted, whirled, or curving; see the Random House Dictionary Reference. Harris certainly teaches patterns in each of Figs. 7-8A and 10-11 including portions which are twisted, whirled, or curving. As to the term "swirl-like", it would presumably be even broader than the term "swirl".

Applicant argues that the swirls of Harris disappear in the final product, leaving only the adhesive masses. Claims 13 and 26 do not require any sort of adhesive pattern in the final product, but simply require that the adhesive is **applied** in the claimed pattern. Note that Claims 13 and 26 are apparatus claims. Nothing in Applicant's specification indicates that an adhesive mass may not be swirl-like in shape.

"Swirl-like" is a broad term. The adhesive masses of Harris, including adhesive masses 122 and 142, are swirl-like in shape (Figs. 7-8A and 10-11). In any case, the adhesive masses of Harris would be likely to retain a generally swirl-like shape even in the final product (Figs. 7-8A and 10-11, paragraph 14, Claims 1 and 5).

Applicant argues that Harris fails to teach the combination of a swirl-like pattern including a plurality of loops that change as a function of distance, and an adhesive pattern that changes as a function of distance according to the adhesive dose and weight per area along the distance. Harris teaches the swirl-like pattern including a plurality of loops (Fig. 7 shows loops; paragraph 39 confirms that the loops shown in Fig. 7 are formed by crossovers; paragraph 43 teaches that either crossing patterns or non-crossing patterns may be used, with a crossing pattern preferred; a crossing pattern forms a loop as the adhesive filament crosses over itself). Harris teaches that the swirl-like patterns may not have uniform shapes, and also that the actual patterns in practice will typically be more irregularly shaped than those shown in the figures (see paragraph 40; note swirl-like patterns include the areas of crossover points 112 and adhesive masses 122 and 142, Figs. 7-8A and 10-11). Harris does not expressly teach the loop size changing as a function of distance. However, in light of Harris' teaching that the swirl-like patterns may not have uniform shapes and may be irregularly shaped, it would be obvious to modify Harris to include a change in loop size as a function of distance. Note that the claims do not require that the change in loop size as a function of distance includes any particular amount of size change, nor that the function is regular. Yoshioka simply confirms that at least some change in loop size as a function

of distance is typically found in adhesive application, and may be desirable to some extent (Figs. 1 and 4; see also col. 1, lines 28-49, col. 5, lines 32-67). As to change in adhesive dose, Harris teaches that the thicker sections of adhesive are formed by crossover points forming conglomerated adhesive masses, with the adhesive masses being preferably at least twice the width of the thinner sections of adhesive (Figs. 7-11 and paragraphs 12 and 39-42). Harris teaches that the thinner sections of adhesive may be stretched, including stretching to their breaking point (paragraph 42, Claims 1, 4, 6-7, 9, 17-19). Given Harris' teaching of thick conglomerated adhesive masses joined by thin or even broken adhesive filaments, it would have been obvious to one of ordinary skill in the art for the weight per unit area of adhesive to vary by at least 20% by weight. Although not necessary to this analysis, Yoshioka confirms that change in adhesive dose as a function of distance is desirable in that it increases the amount of adhesive at crossover or intersection points, which helps to prevent delamination without unduly interfering with permeability, provided that the number of crossover points is not too large (Figs. 1 and 4, col. 1, lines 28-55, col. 5, line 32 to col. 6, line 36, col. 7, lines 32-48; note that the adhesive dose doubles at the points where the adhesive intersects with other adhesive or with itself). A certain amount of change in loop size and adhesive dose and weight per area would be typically found in adhesive application during the adhesive application process, as taught by Harris in paragraphs 12 and 40; Yoshioka confirms that this irregularity is not undesirable, but can actually increase resistance to delamination (Yoshioka col. 1, lines 28-65).

Although not necessary to the above analysis, U.S. Patent No. 4,960,619 to Slautterback also confirms that loop size varying as a function of distance is well known in the art (Slautterback, Abstract, Figs. 8-10, col. 2, lines 60-65, Claim 3). Note that U.S. Patent Application Publication No. 2001/0038039 to Schultz teaches varying the tip offset of an adhesive nozzle "on the fly" without stopping during the application of adhesive, which would change the size of the loop (Schultz, paragraphs 7, 9, and 95). U.S. Patent No. 6,200,635 to Kwok teaches loop size changing as a function of distance in the cross direction (Kwok, Figs. 3-4, col. 6, line 54 to col. 7, line 53).

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner’s answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Paula Craig

/Paula L Craig/

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